October 22, 2003

Johnny Pappas, Sr. Environmental Engineer
Plateau Mining Corporation
P.O. Box 30
Helper, Utah 84526-0030

Re: Industrial Post-Mining Land Use Change Amendment Name, Plateau Mining Corporation, Willow Creek Mine, C/007/0038, Task ID #1749, Outgoing File

Dear Mr. Pappas:

The above-referenced amendment has been reviewed. There are deficiencies that must be adequately addressed prior to approval. A copy of our Technical Analysis is enclosed for your information. In order for us to continue to process your application, please respond to these deficiencies by November 24, 2003.

If you have any questions, please call me at (801) 538-5325 or Dana Dean at (801) 538-5320.

Sincerely,

/S/

Daron R. Haddock
Permit Supervisor

an
Enclosure
cc: Price Field Office
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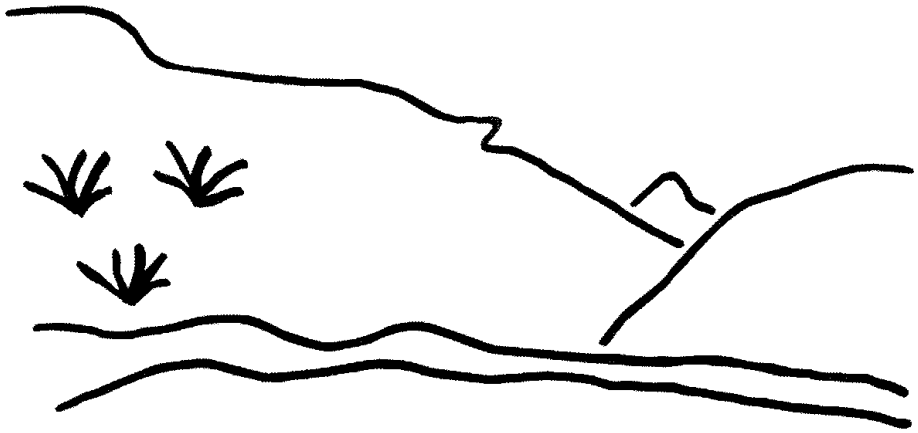
State of Utah



Utah Oil Gas and Mining

Coal Regulatory Program

Willow Creek Mine
Industrial Post-Mining Land-Use Change
C/007/0038, Task ID #1691
Technical Analysis
October 20, 2003

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TECHNICAL ANALYSIS

The Division ensures compliance with the Surface Mining Control and Reclamation Act of 1977(SMCRA). When mines submit a Permit Application Package or an amendment to their Mining and Reclamation Plan (MRP), the Division reviews the proposal for conformance to the R645-Coal Mining Rules. This Technical Analysis is such a review. Regardless of these analyses, the Permittee must comply with the minimum regulatory requirements as established by SMCRA.

Readers of this document must be aware that the regulatory requirements are included by reference. A complete and current copy of these regulations and a copy of the Technical Analysis and Findings Review Guide can be found at http://ogm.utah.gov/coal

This Technical Analysis (TA) is written as part of the permit review process. It documents the Findings that the Division has made to date regarding the application for a permit and is the basis for permitting decisions with regard to the application. The TA is broken down into logical section headings which comprise the necessary components of an application. Each section is analyzed and specific findings are then provided which indicate whether or not the application is in compliance with the requirements.

Often the first technical review of an application finds that the application contains some deficiencies. The deficiencies are discussed in the body of the TA and are identified by a regulatory reference which describes the minimum requirements. In this Technical Analysis we have summarized the deficiencies at the beginning of the document to aid in responding to them. Once all of the deficiencies have been adequately addressed, the TA will be considered final for the permitting action.

It may be that not every topic or regulatory requirement is discussed in this version of the TA. Generally only those sections are analyzed that pertain to a particular permitting action. TA's may have been completed previously and the revised information has not altered the original findings. Those sections that are not discussed in this document are generally considered to be in compliance.

INTRODUCTION

Plateau Mining Corporation submitted an amendment on September 12, 2003 to change the post-mining land-use at the Willow Creek Mine office site. The new use would be industrial.

The proposal does not include the wash plant area, School House Canyon, Barn Canyon, or Gravel Canyon.

SUMMARY OF DEFICIENCIES

The Technical analysis of the proposed permit changes cannot be completed at this time. Additional information is requested of the Permittee to address deficiencies in the proposal. A summary of deficiencies is provided below. Additional comments and concerns may also be found within the analysis and findings made in this Draft Technical Analysis. Upon finalization of this review, any deficiencies will be evaluated for compliance with the regulatory requirements. Such deficiencies may be conditioned to the requirements of the permit issued by the division, result in denial of the proposed permit changes, or may result in other executive or enforcement action and deemed necessary by the Division at that time to achieve compliance with the Utah Coal Regulatory Program.

Accordingly, the Permittee must address those deficiencies as found within this Draft Technical Analysis and provide the following, prior to approval, in accordance with the requirements of:

Regulations

R645-301-553.110; Although commitments appear to be in place, the partial reclamation of the mine portal area (See sections L-L', M-M', N-N', Map 22A) does not "approximate" the pre-mining surface as depicted by the green line profile. The total reclamation of the mine facilities area must include additional backfilling and grading of the portal area to meet the requirements of approximate original contour..... 13

R645-301-553.130, Specific criteria essential to ensuring a long-term static safety factor of 1.3 are contained in two separate documents, (AML Reclamation Plan, and Exhibit 22). The Permittee must incorporate such specific design requirements into the proposal. The Permittee must also discuss the procedures they plan to use to ensure that the design is properly implemented..... 15

RECLAMATION PLAN

POST-MINING LAND-USES

Regulatory Reference: 30 CFR Sec. 784.15, 784.200, 785.16, 817.133; R645-301-412, -301-413, -301-414, -302-270, -302-271, -302-272, -302-273, -302-274, -302-275.

Analysis:

The Permittee proposes to change the currently approved post-mining land-use from dispersed recreational use, wildlife habitat and low intensity grazing (See Volume 1, Section 3.4.1.3**,** page 3.4-2 of the Willow Creek Mine mining and reclamation plan) to include these, as well as a potential "industrial" use for the surface facilities at the Willow Creek operation. The proposal would retain the main administration building and bathhouse, the warehouse building, the shop building, several storage areas located up-canyon of the mine site sediment pond, the propane tanks, the electrical substation, and all roads which are necessary to provide access to each of these facilities. The total acreage involved is approximately 36.4 acres. A large amount of this acreage could store bulk materials, such as coke breeze, or coal fines as part of an agglomeration process.

The Division's obligation to the State of Utah is to regulate exploration for, and development of coal in conformance with UCA 40-10 and the Surface Mining Control and Reclamation Act of 1977 which: "*…achieves the successful reclamation of land affected by coal mining activities."*

The Division can approve a change in the post-mining land-use of the surface facilities area to include "industrial". However, the Permittee must provide positive verification that the "industrial" use is met (R645-301-413.310). If the Permittee cannot provide adequate verification, then the Division must require the Permittee to completely reclaim the site. Although a **Reclamation Timing and Sequencing** section is included as part of the proposal (See submittal, page 5.4-3, section **5.4.2.1**), there is not a defined time period for which the buildings and the remaining facilities will be allowed to remain unoccupied (R645-301-413.333). To allow the facilities to remain unoccupied for an undetermined length of time is not in the best interest of the Division, and does not meet the requirements of R645-301-413.333 or -301-542.100.

There is no discussion of the type of proposed "industrial" land-use that the Permittee would allow to be implemented. "Industrial" is far too general a term. The proposed industrial use must not be impractical or unreasonable, (**R645-301-413.331**). It needs to be clarified or

committed to that the Permittee would not allow any industry to come in which could potentially degrade ground or surface water resources, (See **R645-301-413.320**).

Findings:

Information provided in the application is not adequate to meet the minimum Post Mining Land Uses requirements of the Regulations. Prior to approval, the Permittee must provide the following in accordance with:

R645-301-413.310, The Permittee must establish and describe a reasonable time frame for implementation of the "industrial" post-mining use. If this time frame cannot be met (R645-301-413.333), the Permittee must initiate total reclamation of the mine facilities area.

R645-301-542.100, the Permittee must amend the reclamation timetable depicted as Figure 5.4-2 in the mining and reclamation plan (MRP) to include the anticipated time frame for which the mine facilities area will be allowed to remain unoccupied.

R645-301-413.320, R645-301-413.331, the Permittee must describe what types of industrial uses would be considered for implementation within the permit area. The uses must not be impractical or unreasonable (R645-301-413.331), nor can they be an actual or probable hazard to public health or safety, nor be a threat to surface and/or ground water diminution or pollution.

APPROXIMATE ORIGINAL CONTOUR RESTORATION

Regulatory Reference: 30 CFR Sec. 784.15, 785.16, 817.102, 817.107, 817.133; R645-301-234, -301-412, -301-413, -301-512, -301-531, -301-533, -301-553, -301-536, -301-542, -301-731, -301-732, -301-733, -301-764.

Analysis:

The Permittee proposes to add an additional use of "industrial" to the already approved post-mining land-uses of wild life habitat and grazing. The approved reclamation plan addresses the complete and total reclamation of the main mine facilities area.

If approved, this industrial classification would allow the Permittee to leave three buildings associated with the mine (the bath house/administration building, the warehouse, and the maintenance shop facility). Most individuals consider the maintenance shop facility to be the

most valuable of the three; however, the building sits in close proximity to the highwall area, which the Permittee is proposing to reclaim only partially.

Map 22A shows cross-sections of the areas to be reclaimed post-mining/pre-industrial use. Sections L-L', M-M' and N-N' depict the cross-sections to be established as fill material is placed to establish reclamation of the portal area, Reclaim Area 2. A review of these sections reveals that the slopes will be established at the following gradients: 1.85/1, 2.3/1, and 1.84/1 respectively. Map 22A also depicts the pre-mining configuration of the land on the same cross-sections. It is assumed that this "pre-mining" surface is also the final surface of the land, following completion of the AML project. The Permittee is not seeking a variance from the requirements of returning the portal highwall area to approximate original contour (AOC). In order to meet the requirements of AOC, the Permittee must return the highwall area to approximately the same configuration that existed when the AML project was completed. If the pre-mining surface (green line on cross-sections) and the AML surface configuration are the same, then only two of the three projected cross-sections (L-L' and N-N') actually meet or exceed the AML highwall covering requirement. Cross-section M-M' only proposes to backfill to an elevation approximately twenty-one feet lower than the pre-mining surface configuration (green line). The buildings and the reclaimed highwall may remain for several generations, or longer, depending upon the need and the economic condition of the area.

An examination of the document titled **Price River Coal Pile Project, Phase 3, CONTRACT SPECIFICATIONS,** dated Fall 1990, AMR/007/907, page 55, section 3.02, SITE GRADING, paragraph A. GENERAL indicates the following:

1) …is to develop the reclaimed contours shown in the drawings and to establish favorable drainage conditions and erosion protection at all sites.
2) The steepest allowable slope of the reclaimed areas shall be 3/1, …or shown on the drawings.
3) Site grading shall be performed to provide a reclamation area that blends well with natural conditions in adjacent areas.

Page 56, paragraph E, FILL, line 14, makes the following commitments; "Fill materials to be compacted with hauled or self propelled compactors shall be placed and spread in horizontal lifts not exceeding 24 inches loose measure. Fill materials to be compacted by hand-guided or hand-operated equipment shall be placed and spread in horizontal lifts not exceeding 12 inches loose measure."

Paragraph "F', FILL COMPACTION, addresses how the fill should be compacted; "Each lift of material placed as fill shall be compacted by a minimum (of) three passes of a compactor exerting a minimum pressure of one hundred (100) pounds per square inch or as specified in Section 0300: Specific Site Requirements. Water shall be used as necessary in the compaction operation for dust control and to achieve the required compaction.

The submittal does not state where the Permittee will obtain fill material to backfill the Willow Creek Mine portal area.

Map 22A contains the cross-section K-K', which will be used to establish the post-mining/pre-industrial contours on the storage pad/main ventilation fan/propane heaters pad. Section K-K' depicts a reshaping of the operational bench into a slope having a length of 125 feet at a gradient of 4.8 H/1V. It is slightly concave at the base, where it will meet the operational bench configuration.

Map 21D shows cross-sections O-O' and I-I'.

Section I-I' (Reclamation Area 5) depicts the backfilling and grading of the disturbance between the west end of the short rock tunnel and the east end of the long tunnel (the tunnels previously provided access through the mountain for the overland conveyor connecting the mine with the preparation plant). The map shows that the Permittee plans to retain two pre-SMCRA highwalls, one located above each of the previously mentioned tunnel openings. Section I-I' will be reshaped to have a slightly concave slope, 197 feet long and 36 feet high (5.47H / 1V). The Permittee provided mass-balance calculations at the base of Map 21D. The Permittee will remove a net of 34,084 cubic yards of material to reclaim this area. The reclaimed slope will blend well with the undisturbed slope located above it.

Section O-O' depicts the reclamation which will occur on the slope due north of sediment pond 001A. The overland conveyor corridor previously occupied this area, to the east end of the short tunnel. Section O-O' depicts that most of the reclamation will be accomplished by removing the berm at the crest of the outslope, and filling in the shallow ditch which paralleled the conveyor on the north side. The proposed industrial use for the area will retain sediment pond 001A, as well as the access roads that will allow machine access for pond maintenance purposes. The Permittee provided mass-balance volumes at the bottom of MAP 21D. This area will have a net cut volume of 3,882 cubic yards.

The current approved plan for this area does not require the Permittee to return the Willow Creek channel to its original location. The Permittee relocated the channel so that they could construct pond 001A in its current location.

Maps 21A, 22A and 18C do not correlate. Map 21A and cross-section K-K' (Map 22A) show that the pad area, previously occupied by the main ventilation fan/heaters and storage area, will be reclaimed as part of the industrial post-mining land-use. MAP 18C depicts this area as part of the storage area retained for the industrial post-mining land-use.

Findings:

Information provided in the application is not adequate to meet the minimum Approximate Original Contour Restoration requirements of the Regulations. Prior to approval, the Permittee must provide the following in accordance with:

R645-301-553.110; Although commitments appear to be in place, the partial reclamation of the mine portal area (See sections L-L', M-M', N-N', Map 22A) does not "approximate" the pre-mining surface as depicted by the green line profile. The total reclamation of the mine facilities area must include additional backfilling and grading of the portal area to meet the requirements of approximate original contour.

BACKFILLING AND GRADING

Regulatory Reference: 30 CFR Sec. 785.15, 817.102, 817.107; R645-301-234, -301-537, -301-552, -301-553, -302-230, -302-231, -302-232, -302-233.

Analysis:

General

The application does not contain any backfilling and grading design criteria. Descriptions of the methods the Permittee will use to ensure proper implementations of the design, if approved are also absent. There is no mention of how the Permittee will achieve a long-term static safety factor of 1.3.

Page 5.4-14 of the MRP states the following:

"Generally, backfill material will be placed in relatively uniform lifts and will be compacted by normal equipment traffic. Backfilled areas will be sloped and graded to promote effective drainage and to the extent of the operational feasibility. Fill slopes will be limited to a maximum slope of approximately 3H:1V…and graded slopes in native material will vary dependent on material from less than 5H:1V to as much as 0.5H/1V in competent rock consistent with slope stability considerations as documented in Exhibit 11, Geotechnical Investigations. Recommended slope limitations for final cut and fill slopes will result in slope configurations having a static safety factor of at least 1.3. The design safety factor for any benched slopes is 1.5…In limited areas where reclamation slopes will be tying into undisturbed slopes, the reclamation slope will be up to 1.1H/1V. The slopes at greater than 2H:1V will be of limited length

and width and will only be a small portion of the reclamation slope. A slope stability analysis was performed on the longest reclamation slope, which also contained a section with the maximum proposed slope."

The slope stability analysis in Exhibit 22 of the MRP establishes a minimum factor of safety for the reclamation slope of 1.30 that complies with the minimum requirements of R645-301-553.130.

Page 6, paragraph "F" of section IV of the Rollins, Brown and Gunnell report (Exhibit 22 of the MRP) discusses **CUT AND FILL SLOPES.**

"Stability analyses of cut and fill slopes in the colluvial and alluvial materials have been made based upon observation of existing slopes in the soil in the vicinity of the site, the boring data, and the results of laboratory tests. Stability analyses have been performed using a computer model of Spencer's Method. Spencer's Method satisfies both force and moment equilibrium and is considered to be a satisfactory procedure for solving limiting equilibrium problems. The computer model used follows the procedure developed by Wright at the University of Texas for the U.S. Corps of Engineers."

"Based upon the results of stability analyses, the following general recommendations are made with respect to cut slopes in the natural colluvium or alluvial materials. Cut slopes of 1.5 horizontal to 1 vertical or flatter can be used for cuts less than 20 feet in height, if positive drainage is provided to prevent saturation of the slopes. For cuts in excess of 20 feet in height, cut slopes of 2 horizontal to 1 vertical or flatter should be used."

"Fill slopes constructed with on site granular soils or coal refuse and densified to at least 90% of ASTM D1557 should be designed with a maximum slope of 2 horizontal to 1 vertical. Surface water diversion channels should be constructed along the crest of all cut and fill slopes to prevent water from running over the face of the slope."

The reclamation gradients depicted on Map 22A, Post-Mining Cross-Sections, Industrial Post-Mining Land-Use Change Alternative all depict slope gradients less than 2H/1V. Therefore, the reclamation slopes being proposed meet the requirements of the RB&G slope stability analysis for maximum gradient. The Permittee has addressed compaction requirements.

The RB&G slope stability analysis is P.E. certified by Mr. Brad Price, a registered professional engineer in the State of Utah.

Findings:

Information provided in the application is not adequate to meet the minimum Backfilling and Grading requirements of the Regulations. Prior to approval, the Permittee must provide the following in accordance with:

R645-301-553.130, Specific criteria essential to ensuring a long-term static safety factor of 1.3 are contained in two separate documents, (AML Reclamation Plan, and Exhibit 22). The Permittee must incorporate such specific design requirements into the proposal. The Permittee must also discuss the procedures they plan to use to ensure that the design is properly implemented.

MINE OPENINGS

Regulatory Reference: 30 CFR Sec. 817.13, 817.14, 817.15; R645-301-513, -301-529, -301-551, -301-631, -301-748, -301-765, -301-748.

Analysis:

The Permittee proposes to change the method of permanent abandonment for the four tunnel openings (long and short tunnels) that provided the route through the hillside for the overland conveyor. The currently approved plan calls for the construction of solid block seals utilizing eight inch solid block, wet wall construction with pilaster, as necessary as described on page 5.4-9, Stabilization and Sealing of Mine Openings**,** paragraph two, and in *Figure 5.4-3, Typical Portal Seal.*

The Permittee proposes to backfill the openings in accordance with 30 CFR 75.1711-2, as required by MSHA. When the tunnels were explored during the very first development stages of the Willow Creek Mine in 1994, **the tunnels had seals installed in them**. The date of sealing/installation of those seals is not known.

R645-301-529.100 states that: "Each shaft or other exposed underground opening will be…or otherwise managed as approved by the Division. If these openings are uncovered or exposed by coal mining and reclamation operations within the permit area **they will be permanently closed** …**or otherwise managed in a manner approved by the Division."**

R645-301-551, states the following; "…**each** shaft, drift, adit, **tunnel**, or other opening to the surface from underground will be capped, **sealed and backfilled**, or otherwise properly managed, as required by the Division and consistent with MSHA, 30 CFR 75.1711. Permanent

closure methods will be designed to prevent access to the mine workings by people, livestock, fish and wildlife, machinery…".

The Division feels that the phrase sealed and backfilled, is two verbs requiring two actions, i.e., 1) sealing by the construction of eight inch solid block seals, mortared joints, with pilaster if necessary, with a plastered face, and 2) backfilling the entry for a distance of at least twenty-five feet with incombustible material. The Permittee's proposal is to seal the tunnels' openings by backfilling only, which would not be a permanent closure method designed to bar access by machinery. MAP 21 D, which has been submitted as part of the proposal depicts the four areas above each of the four tunnel openings as *pre-SMCRA highwalls which are to be retained* and thus not have adequate fill placed over them to return these areas to approximate original contour. As the Division feels that the closure of these tunnel openings will be for eternity, the Division directs the Permittee to install the eight inch solid block seals with mortared joints and pilaster if necessary, depending on the height of the wall, and plaster the face of each. Also, the seals must be hitched into the tunnel walls, as stated in the currently approved mining and reclamation plan. **The Permittee needs to notify the Division when the four seals are being constructed, such that adequate verification can be made and documented prior to backfilling the entries.** These seals, in addition to the twenty-five feet of incombustible fill placed outby each seal, should prevent any type of access by unauthorized individuals.

The Permittee's proposal to create a seal at each opening of the two tunnels with incombustible material only is not adequate, as the potential exists for the material to settle, and leave enough of an opening for unauthorized entrance. A cement block seal will have a greater tendency to deter any unauthorized curiosity relative to the four tunnel openings.

Findings:

Information provided in the application is not adequate to meet the minimum Mine Openings requirements of the Regulations. Prior to approval, the Permittee must provide the following in accordance with:

R645-301-529.100 or R645-301-551, The Permittee must provide a plan to **permanently** seal the tunnels in a manner that satisfies the Rules.

ROAD SYSTEMS AND OTHER TRANSPORTATION FACILITIES

Regulatory Reference: 30 CFR Sec. 701.5, 784.24, 817.150, 817.151; R645-100-200, -301-513, -301-521, -301-527, -301-534, -301-537, -301-732.

Analysis:

Reclamation

The access roads to the long and short rock tunnels (Primary Roads 14, 15, and 16) will not support the proposed industrial land-use designation, and will be reclaimed as part of the normal reclamation process.

Retention

Page 5.4-11 of the submittal addresses the roads that the Permittee will retain to provide maintenance access to the site's utilities, as well as access to the storage areas that will remain. These include:

- The main road to the site from State Highway 191 (PR-1);
- The road-cuts and bench-cut in the fire fighting and mine water tank location (PR-12);
- The road to the run of mine coal stockpile area (PR-2 and PR-13);
- The roads to pond 001A (PR-7 and PR-17);
- The road to the storage pad located southwest of the mine water tanks (PR-18 and PR-12);
- The access road to the electrical substation and the propane tanks pad (PR-6); and
- The road that provides access to the methane pump facility, and ditch UD-3 (AN-1).

The retention of these roads is necessary to support the proposed change to the post-mining land-use having the industrial classification.

The roads to are classified as primary, with the exception of AN-1. The Permittee has addressed all requirements relative to R645-301-527 in Volume 1, section 4.5of the MRP (Page 4.5-45).

New roads may need to be implemented during the industrial phase of the property. That post-mining usage will be outside of the jurisdiction of the R645 coal rules.

Two other roads will remain as part of the "industrial" post-mining land-use; these are PR-19, which is the primary access to Barn Canyon (Canyon behind main substation at the preparation plant) and PR-3, which is the main access road into the preparation plant area. The retention of PR-3 is necessary to ensure access to the utility corridor that parallels the Price River.

Findings:

Information provided in the application is adequate to meet the minimum Road Systems and Other Transportation Facilities requirements of the regulations.

HYDROLOGIC INFORMATION

Regulatory Reference: 30 CFR Sec. 784.14, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-301-512, -301-513, -301-514, -301-515, -301-532, -301-533, -301-542, -301-723, -301-724, -301-725, -301-726, -301-728, -301-729, -301-731, -301-733, -301-742, -301-743, -301-750, -301-751, -301-760, -301-761.

Analysis:

Hydrologic Reclamation Plan

The Permittee will only construct some of the previously designed new reclamation drainage channels as part of the industrial post-mining land-use. They are WCRD-11 through WCRD-19. The Permittee has properly designed and sized each for a 10-year 6-hour storm event.

The Permittee will retain sedimentation pond 001 as part of the industrial post-mining land-use. All precipitation that encounters the industrial area will report to it to remove excess sediments. Reclamation of the belt corridor will result in additional runoff reporting to the pond. The Permittee performed calculations to ensure that the pond will be able to contain the additional runoff from watersheds 9 and 10.

The Permittee will construct several diversion ditches to direct runoff around the industrial site. The Permittee provided calculations to show that the designs are adequate, and maps to illustrate where they will construct each ditch and which watersheds report to each.

The Permittee will place/leave several culverts to support the industrial use. They provided calculations to show that the designs are adequate, and maps to illustrate where they will place each culvert and what runoff will report to each.

Findings:

Information provided in the application is adequate to meet the minimum Hydrologic Reclamation requirements of the regulations.

MAPS, PLANS, AND CROSS-SECTIONS OF RECLAMATION OPERATIONS

Regulatory Reference: 30 CFR Sec. 784.23; R645-301-323, -301-512, -301-521, -301-542, -301-632, -301-731.

Analysis:

Affected Area Boundary Maps

Map 18C accurately delineates the portion of the mine site disturbed area which will not be reclaimed, and which will be designated as having an "industrial" post-mining land-use, upon Division approval of the amendment. Maps 21A, 22A and 18C do not correlate. Map 21A and cross-section K-K' (Map 22A) show that the pad area, previously occupied by the main ventilation fan/heaters and storage area, will be reclaimed as part of the industrial post-mining land-use. MAP 18C depicts this area as part of the storage area retained for the industrial post-mining land-use. The Permittee needs to decide whether the fan pad will be reclaimed and change either MAP 18C, or 21A and 22A to reflect that decision (the maps must correlate with each another).

Reclamation Backfilling And Grading Maps

The proposal contains final surface contour maps as Maps 21A, 21B, 21C, and 21D. Map 22A contains cross-sections relevant to all of the proposed reclamation areas (areas being proposed as part of the post-mining industrial designation do not have cross-sections). All maps mentioned here contain information relative to POST-MINING CROSS-SECTIONS, FULL RECLAMATION ALTERNATIVE in addition to the information provided for the INDUSTRIAL POST-MINING LAND-USE CHANGE ALTERNATIVE. All maps are P.E. certified by a State of Utah registered professional engineer.

Reclamation Facilities Maps

Map 18C identifies all structures which are to remain as part of the proposed industrial post-mining land-use.

Final Surface Configuration Maps

See Reclamation and Backfilling Grading Maps.

Reclamation Treatments Maps

Map 18-C shows all of the facilities to remain for the industrial land-use. Maps 21A through 21D show the locations of post-mining drainage structures. Map 21G shows the watersheds and related reclamation ditches for the industrial use. Map 22D shows stream profiles for the pre-mining, operational, and post-mining industrial configurations.

Certification Requirements.

The following maps have been P.E. certified by Mr. Layne Jensen, a Professional Engineer registered and certified by the Utah Department of Commerce, Division of Occupational and Professional Licensing; MAPS 6, 9, 18A, 18C, 21A-D, 21 G, 22A, and 22D.

Findings:

Information provided in the application is not adequate to meet the minimum Maps, Plans and Cross-Sections of Reclamation Operations requirements of the Regulations. Prior to approval, the Permittee must provide the following in accordance with:

R645-301-542.320, The Permittee must decide the status of the fan pad/equipment storage area and submit new maps that reflect that status (i.e., MAPS 18C, 21A and 22A must correlate).

BONDING AND INSURANCE REQUIREMENTS

Regulatory Reference: 30 CFR Sec. 800; R645-301-800, et seq.

Analysis:

Determination of Bond Amount

The Division is required to bond for the worst-case scenario. That scenario for the Willow Creek mine would be that the alternative post-mining land-use change cannot be implemented. In that case, the Permittee must reclaim according to the original reclamation plan. The Division uses the worst-case scenario because there is no guarantee that the post-mining land-use could be implemented during bond forfeiture. Therefore, the bond amount will not change at this time.

The Permittee's reclamation cost estimate does not use the indirect cost methods as outlined in the Division's technical directive. The Division will use the methods outlined in the technical directive when they calculate the bond amount.

Since the Division calculates the bond amount and the Division has enough information to calculate the bond for the worst-case scenario, all information relative to the bond is adequate. If the alternative post-mining land-use change is implemented the Division will modify the reclamation cost estimate based on the alternative reclamation plan.

Findings:

The information submitted in the amendment is adequate to meet the minimum requirements of this section of the regulations. Since the Division must base the reclamation cost estimate on the worst case scenario, the reclamation cost estimate based on implementation of the alternative post-mining land-use change will not be incorporated into the Division's reclamation cost estimate. If the alternative post-mining land-use change is implemented the Division will make changes at that time.